

Chapter 2: Population, Employment, and Land Use

This Chapter provides a description of Montgomery County, its people, its work force and major employers, and its land use practices. These factors give helpful information for projecting solid waste quantities and for planning the future needs of the solid waste system accordingly. Trends in population and employment are indicative of the quantity and the composition of waste generated. Land use practices and conditions also influence solid waste planning in that land use patterns may place constraints on the location of solid waste facilities. This chapter is organized as follows:

- 2.1 Population Trends
- 2.2 Employment Trends
- 2.3 Zoning and Comprehensive Land Use
- 2.4 Subsidiary Plans

Acronyms and solid waste terms used in this chapter and throughout this document are defined in Appendix A.

2.1 POPULATION TRENDS

The M-NCPPC estimate of the County's population in 2008 is 951,240. During the 1980s, Montgomery County accounted for almost one-third of Maryland's population increase. Since 1989, Montgomery County has been the state's most populous jurisdiction. This period produced an annual growth rate of about 3.1 percent. While the growth rate during the 1990's was more moderate at about 1.54 percent annually, the Maryland State Office of Planning projects that the County will remain the most populous jurisdiction for the next 25 years. Two trends are attributed for this ongoing growth: record high levels of births to County residents; and strong immigration from other countries to the County.

Rapid growth in the number of County households occurred between 1970 and 1990. The rate of growth for households was almost twice the rate of total population growth in the same period. Damascus showed the greatest percent growth in households for the period. Over one-third of the County's gains in the number of households between 1980 and 1990 occurred along the Interstate-270 corridor in the Gaithersburg and Germantown areas. The Colesville area along U.S. Route 29 was second in growth with 18 percent. These three areas also had the most land available for new development. Combined, they accounted for 60 percent of total County growth in households. Between 1990 and 2000, total households in Montgomery County grew at approximately the same rate as population.

Another trend is the increase of racial diversity. According to M-NCPPC data, racial diversity continues to expand as the population grows in Montgomery County. During the County's high growth period, 1980 to 1990, when the total population increased by one-third, 60 percent of this growth was minority residents. Between 1990 and 2000, population share of minorities rose from 27 percent of the total population to 40 percent¹.

Following national trends, Montgomery County has become a community with fewer persons per household. The average household size dropped from 3.30 to 2.64 persons per household during the past 20 years. This historical trend has the effect of increasing per capita waste generation rates, which are discussed in the waste projections of Chapter 3. Each household requires a defined level of service and generates fixed waste (e.g. telephone directories, newspapers, bills) unrelated to the number of persons domiciled. Therefore, more households in a given population will generate more waste.

¹ http://www.mcparkandplanning.org/research/data_library/census2000/special_reports/SEmapbullets.pdf.

2.1.1 Population Projections

M-NCPPC projections suggest that population growth has slowed considerably since the 1980's with a forecasted annual growth rate averaging approximately 1.0 percent for each year from 2008-2019. Table 2.1 provides population projections for the years 2009-2019.

Table 2.1
Population of Montgomery County, Maryland 2008-2019

Year	Estimated County Population*
2008	951,240
2009	959,504
2010	966,000
2011	977,800
2012	989,600
2013	1,001,400
2014	1,013,200
2015	1,025,000
2016	1,035,000
2017	1,045,000
2018	1,055,000
2019	1,065,000

*Source: M-NCPPC, Cooperative Forecast, Round 7.2 Revised April 2009, five year increments (2005, 2010, 2015, and 2020), intermediate years interpolated; conforms to current County Fiscal Plan.

2.1.2 Municipalities

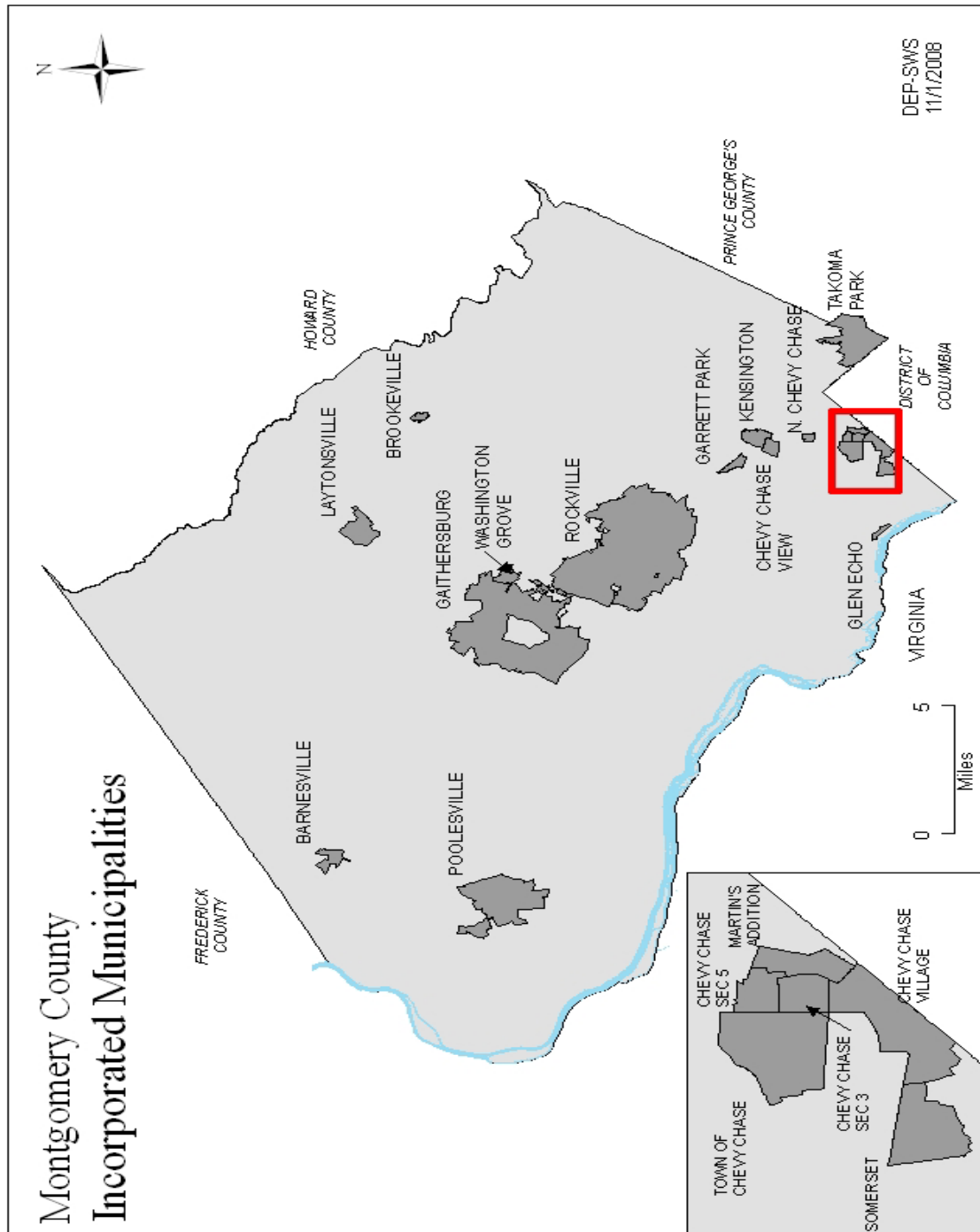
Montgomery County has 19 incorporated municipalities. Approximately 157,000 persons reside in incorporated municipalities within Montgomery County. Table 2.2 lists municipalities in Montgomery County and their populations. Figure 2.1 depicts a map of Montgomery County and locations of its incorporated areas.

Table 2.2
Population of Incorporated Municipalities in Montgomery County, Maryland

Incorporated Municipality	Year 2008 Population
Barnesville, Town of	197
Brookeville, Town of	131
Chevy Chase, Town of	2,803
Chevy Chase Section Five, Village of	659
Chevy Chase Section Three, Village of	793
Chevy Chase View, Town of	901
Chevy Chase Village, Town of	2,109
Gaithersburg, City of	58,744
Garrett Park, Town of	955
Glen Echo, Town of	255
Kensington, Town of	1,946
Laytonsville, Town of	353
Martin's Additions, Village of	900
North Chevy Chase, Village of	484
Poolesville, Town of	5,674
Rockville, City of	60,734
Somerset, Town of	1,169
Takoma Park, City of	17,701
Washington Grove, Town of	566

Source: U.S. Census Bureau, 2008

Figure 2.1
Map of Montgomery County including Municipalities



2.2 EMPLOYMENT TRENDS

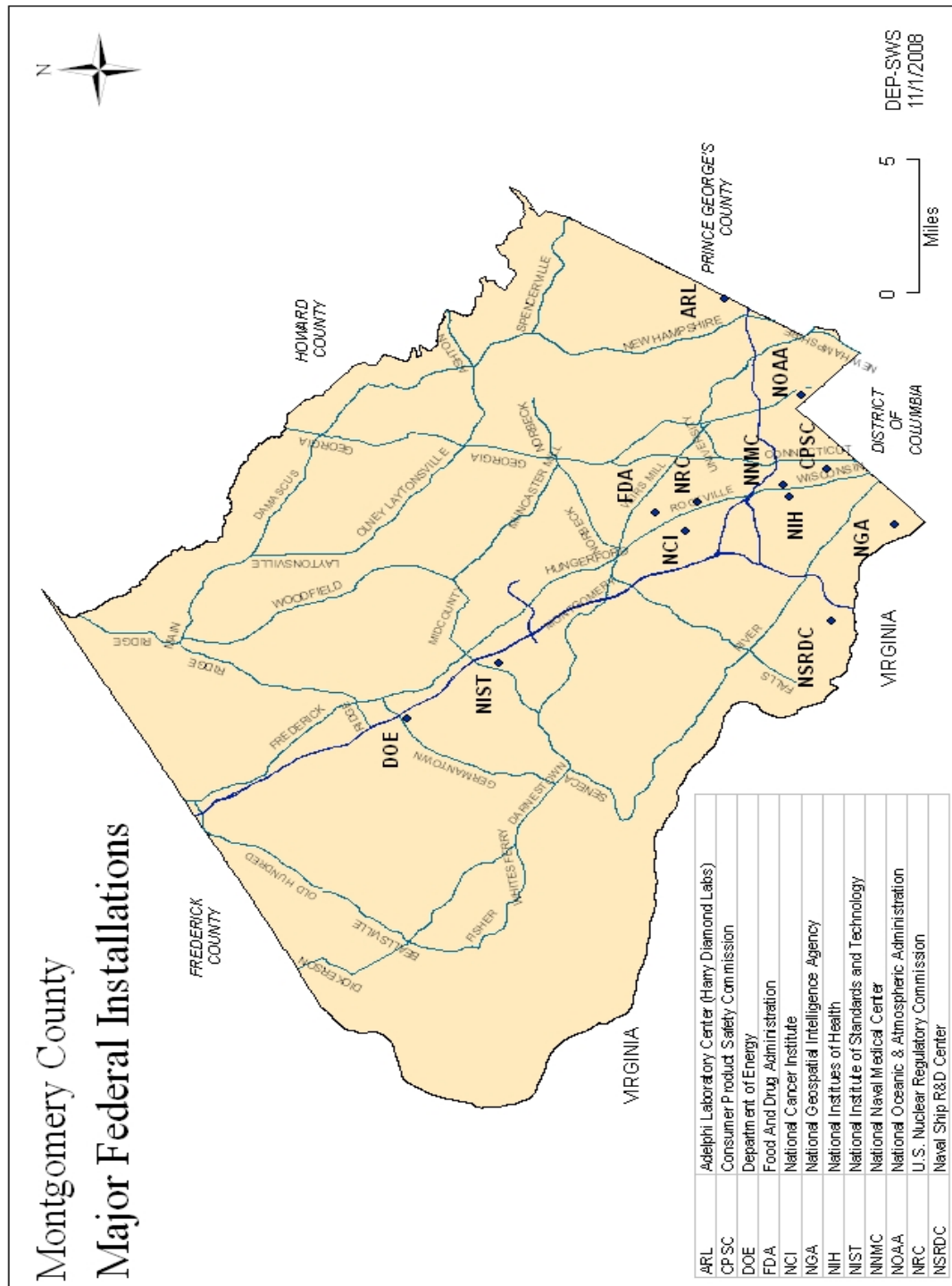
Montgomery County is the largest suburban employment center in the Metropolitan Washington Statistical Area, and is second only to Baltimore City within Maryland. During the last decade, the County led the State in employment growth. While the County experienced a decline in employment during the early 1990's, employment increased by the end of the decade. Over the next 10 years, the employment growth rate in the County is expected to be moderate.

The service sector is the largest category of employment in the County and exceeds federal, state and local government employment combined. This sector includes the following industries: business and repair; personal services; entertainment and recreation; professional health services; professional education services; and other miscellaneous services. Service employment increased 79 percent from 1980 to 1990. Business services were dominant. Retail trade also experienced significant growth during the 1980's, with one-quarter of the growth attributable to food and beverage businesses. During the first half of the 1990's, growth in the service sector slowed. At the same time, private sector employment in the areas of finance, insurance, real estate, transportation, communication, and public utilities jobs showed greater gains. During the second half of the 1990's, growth in the service sector increased 26 percent. Employment growth rate was 5.4 percent for the first five years of 2000s.

2.2.1 Employment Sectors

Over one-third of all jobs in the County are in the service industries, the largest sector of the County work force. Nearly one in five jobs in the County is related to retail trade. The Federal Government is the third largest employment sector in the County as well as the largest single employer in the County. The locations of Federal installations in the County are provided in Figure 2.2.

Figure 2.2 Map of Montgomery County including Federal Installations



2.2.2 Employment Projections

An economic recession in the early 1990's resulted in the loss of 20,000 jobs in the County. A recovery began in 1992, with employment growth continuing through 2006. M-NCPPC forecasts at-place employment (the number of positions located in the County) to grow at an annual rate of 0.39 percent from 2009 to 2010, and then an average of 1.47 percent per year from 2010 to 2019, resulting in a projected employment in the year 2019 of 581,400. Table 2.3 shows M-NCPPC "Round 7.2" projections for at-place employment for the years 2008 to 2019.

Table 2.3
At-Place Employment, Montgomery County, Maryland 2008-2019

Year	Estimated County Employment*
2008	506,000
2009	508,000
2010	510,000
2011	517,400
2012	524,800
2013	532,200
2014	539,600
2015	547,000
2016	555,600
2017	564,200
2018	572,800
2019	581,400

*Source: M-NCPPC, Cooperative Forecast, Round 7.2 Revised April 2009 five year increments (2005, 2010, 2015, 2020), intermediate years interpolated; conforms to current County Fiscal Plan,

2.3 ZONING AND COMPREHENSIVE LAND USE

Land use policies in the County are implemented through planning and zoning decisions. Land use policies directly affect solid waste generation and management, both in terms of the quantity and type of waste generated as well as the properties on which solid waste management facilities may be located.

As stated in Chapter 1 of this Plan, the County's solid waste management goals and objectives conform to State and County land use plans by planning for the quantity of solid waste which must be processed. Waste reduction and recycling reduce the County's need to identify new land for landfills and other solid waste disposal facilities. The use of an out-of-County landfill also supports County land use plans.

The County comprehensive land use plan, *"A General Plan for the Maryland-Washington Regional District in Montgomery and Prince George's Counties, as amended"*, (the General Plan) was adopted in 1964 and most recently revised in 1993. The General Plan also has been amended and amplified over the years by a series of master plans, sector plans, and functional plans. The General Plan includes the policy that the County will be developed on a wedges and corridors approach, with more density concentrated near major transportation corridors interspersed by wedges of large open space and farmland. The County is divided up into 27 planning areas as illustrated in Figure 2.3. For each planning area, a Master Plan must be adopted and reviewed periodically.

"A General Plan Refinement of the Goals and Objectives of Montgomery County," dated December 1993, was approved by the County Council and adopted by M-NCPPC. Objective 9 in the Environment Chapter of the General Plan Refinement states: "Provide an adequate, self-sufficient, well-monitored, and ecologically sound

system for the management of Montgomery County's solid wastes." The following strategies are listed to accomplish this objective:

- "Provide appropriate industrially zoned land necessary to support present and future waste management facilities, including local recycling;
- Consider land use implications when developing a comprehensive solid waste management program;
- Minimize the environmental and other negative impacts of facilities that handle waste products through proper siting and design;
- Explore source reduction of waste through means such as charging collection fees in proportion to the amount of trash produced;
- Increase and promote the public and private use of recycled goods so that the amount of land devoted to land fills is minimized; and
- Cooperate with neighboring jurisdictions in sharing management practices and devising regional waste management strategies so that efficient solutions to waste management can be achieved."

2.3.1 Zoning Requirements Affecting Solid Waste Activities

Chapter 59 of the County Code defines zoning requirements and establishes zones designating agricultural, residential, commercial, industrial, or a mixture of uses at specified densities.² Certain uses are permitted or allowed by special exceptions approved on a case-by-case basis by the Board of Appeals. This Board reviews and holds public hearings on applications for special exceptions. The Board of Appeals also considers variance requests relating to deviations from prescribed limitations such as setbacks and height restrictions. A zoning text amendment is the mechanism by

² This plan shall not be used to create or enforce local land use and zoning requirements .

which the County Council can modify the Zoning Ordinance and authorize changes, additions, or deletions to zones or standards governing the use of zones.

The Zoning Ordinance limits private recycling facilities to specific industrial zones. The Zoning Ordinance limits privately owned transfer stations, landfills and incinerators to the I-2 heavy industrial zone if the County Board of Appeals grants a special exception determining that the specific I-2 parcel is suitable for a transfer station, landfill or incinerator. The County Zoning Ordinance expressly prohibits certain uses, including privately owned and operated incinerators, in industrial zones.³ Privately owned incinerators are allowed in industrial zones only if publicly operated. The County historically has reserved relatively small amounts of land for industrial uses.

2.3.2 Agricultural Preservation

Preservation of agriculture is a high priority in the County. More than 90,000 acres of the County's 316,800 acres are actively farmed. The County and the State have programs for the preservation of agricultural land. Both the State and the County have established agricultural easements using property deeds that carry restrictions to limit non-agricultural use of the property while also providing "right-to-farm protection". The County also applied the Rural Density Transfer (RDT) zone to most agricultural areas in the northern and western parts of the County. Property owned in the RDT zone may trade Transferable Development Rights (TDRs) from their agricultural zone to redirect development to certain non-agricultural sections of the County. Development in the RDT zone is limited to one dwelling per 25 acres. Historically, most landfill candidate sites have been located within RDT zoned areas.

³ See Section 59-C-5.22 of the County Zoning Ordinance.

2.3.3 Environmental Safeguards

Guidelines and regulations ensuring environmental safeguards regarding land use are applied to projects and specific properties undergoing "development review". Development review is a process managed by M-NCPPC through which subdivision and other development projects are evaluated by staff prior to consideration of these projects by the Planning Board. This review process considers issues of environmentally sensitive areas (stream valleys, wetlands), air quality, noise, water quality, conservation, and open space. The process can reduce the environmentally negative effects of construction, such as improper grading, needless loss of trees, and improper flood plain development. The County has promulgated a tree ordinance placing requirements on developers to minimize tree removal. All of these requirements may be in addition to requirements established by construction, building and occupancy permits.

Public facilities are subject to review by M-NCPPC in a process known as Mandatory Referral. Pursuant to the Mandatory Referral requirement, M-NCPPC reviews and makes recommendations regarding plans for new County owned solid waste facilities.

2.3.4 Transportation Considerations for Solid Waste Activities

Solid waste collection vehicles must reach and service all areas of the County. In doing so, solid waste vehicles must safely navigate a wide range of road surfaces and conditions in a manner that minimizes noise, odor and litter disturbances to the community.

Chapter 48 of the County Code and regulations administered by DEP regulate the operation of solid waste vehicles to address potential nuisance and safety issues.

County regulations require that solid waste collection and transfer vehicles must be inspected and registered. Loads of solid waste must be contained or covered during transportation to minimize litter. Collection of solid waste cannot occur before 7 a.m. near residential neighborhoods. State and local transportation laws and regulations impose other safety requirements regarding the handling of heavy vehicles, such as speed and weight limits.

There are additional restrictions to transporting solid waste on County roads. Department of Transportation (DOT) prohibits truck traffic on specified roads in the County. In addition, any new development, including a waste acceptance facility that would generate more than 50 peak hour vehicle trips would require review by M-NCPPC pursuant to the Adequate Public Facilities Ordinance. In such cases, M-NCPPC may recommend improvements to the transportation network.

The County has a policy to minimize solid waste traffic on County roads. In the 1980's, the County constructed the Solid Waste Transfer Station to reduce the number of vehicle trips to the Oaks Landfill. In 1995, the County established a rail haul system to transport solid waste from the Transfer Station to the RRF in order to reduce solid waste truck traffic through communities. In 1997, the County entered into a long-term contract with Brunswick Waste Management Facility, Inc. for disposal of RRF ash bypass waste and non-processible wastes that primarily uses rail transport of these materials. A map of major roadways in the County appears as Figure 2.4.

2.4 SUBSIDIARY PLANS

Title 26.03.03.02B of COMAR requires that “each County plan shall include all or part of the subsidiary plans of the towns, municipal corporations, sanitary districts, privately owned facilities and local, State and federal agencies having existing, planned or programmed development with the county to the extent that these

inclusions shall promote public health, safety and welfare.” No subsidiary solid waste management plans have been received by the County for inclusion in this Plan.

Figure 2.4
Map of Major Roadways in Montgomery County

